

FIG. 1

002080" 2550E960



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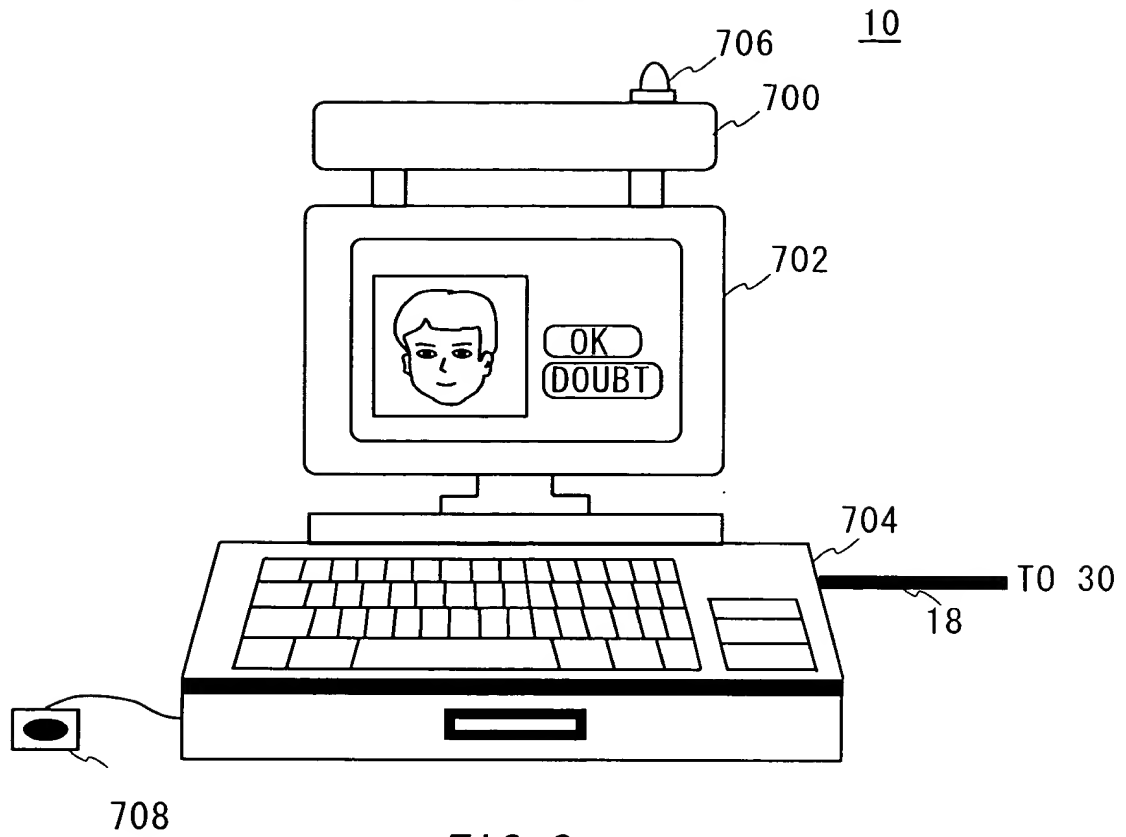


FIG. 2

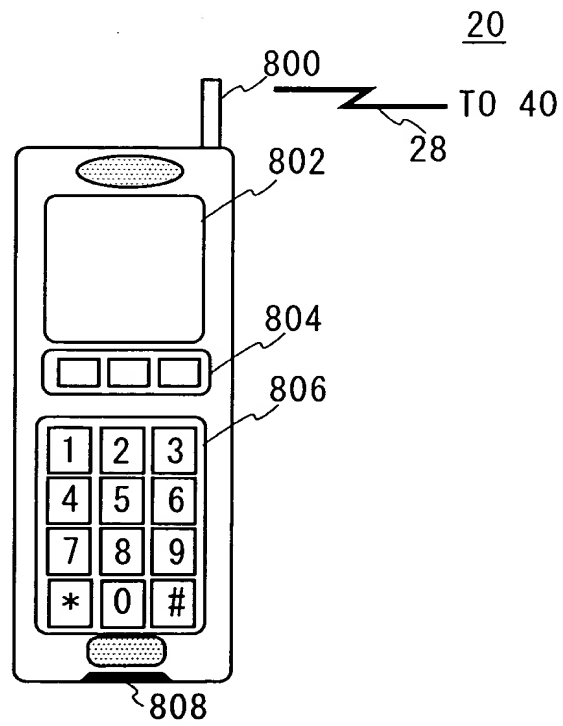


FIG. 3

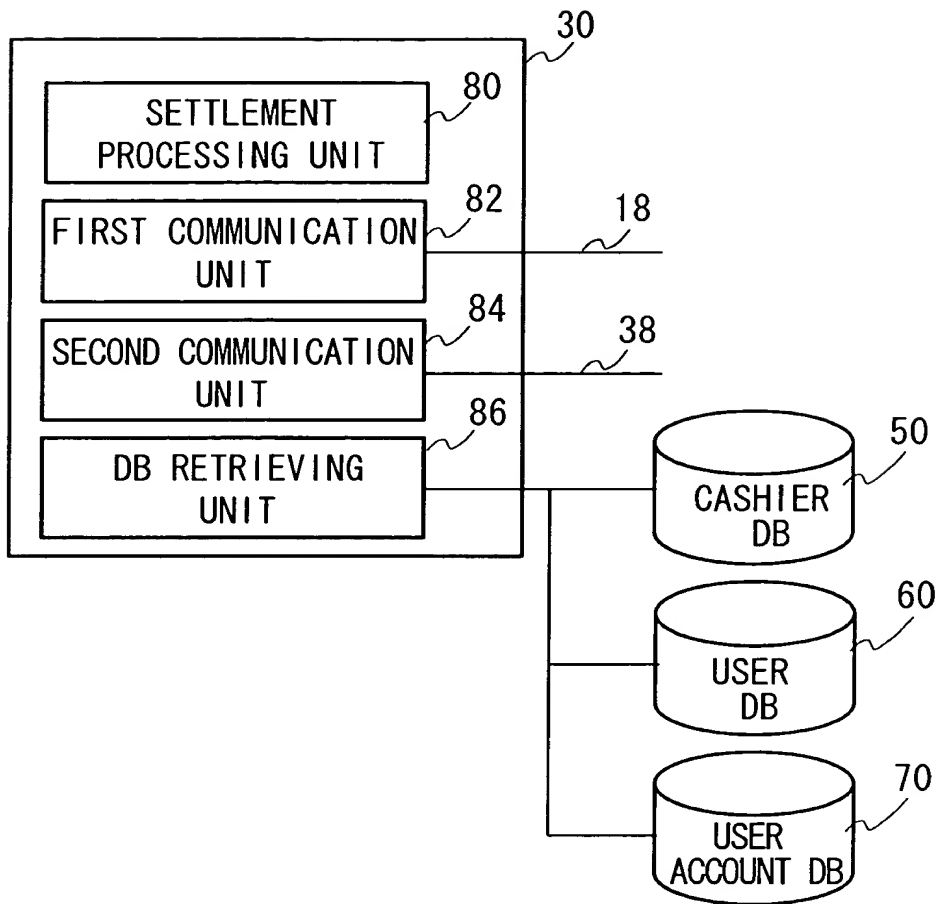


FIG. 4

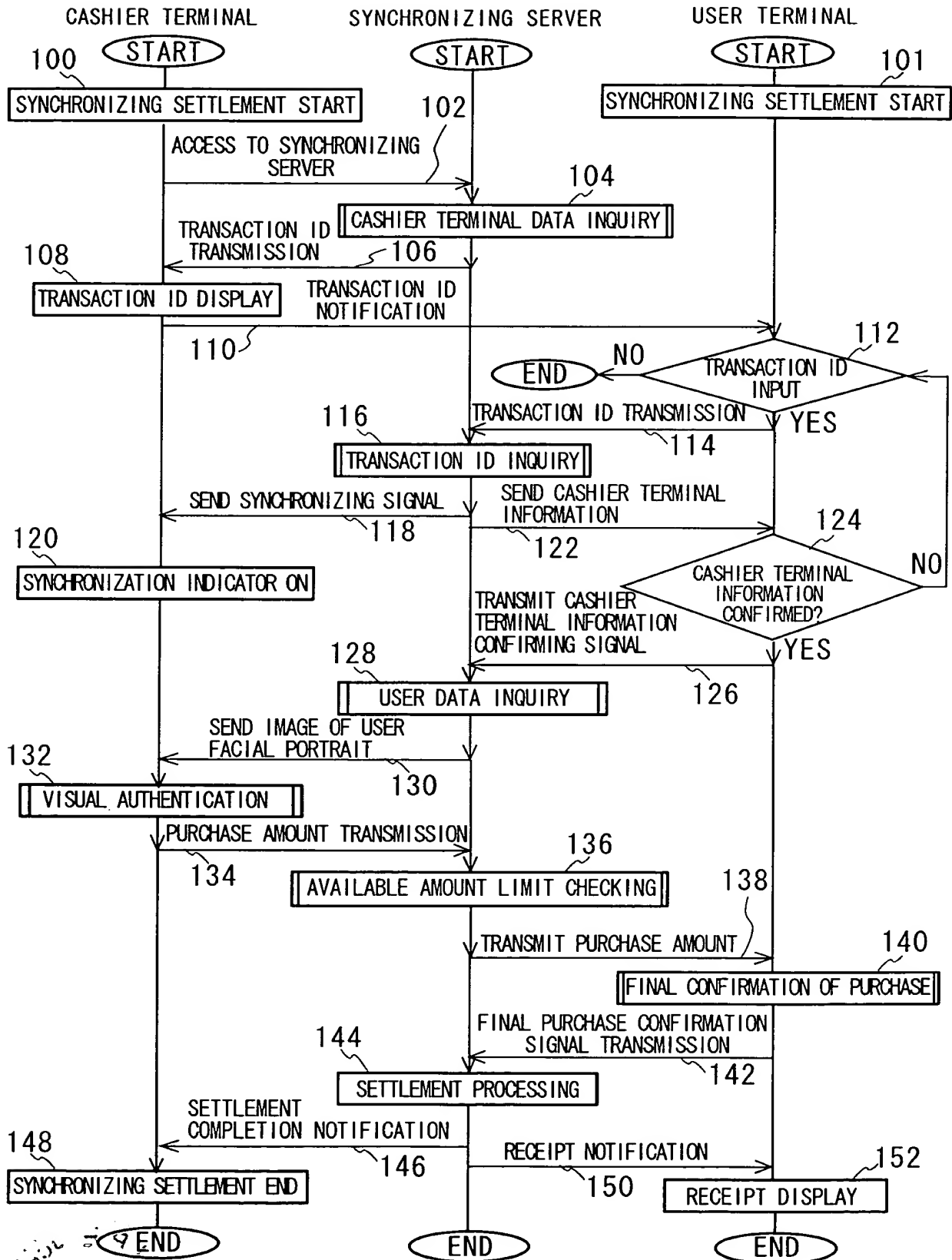


FIG. 5

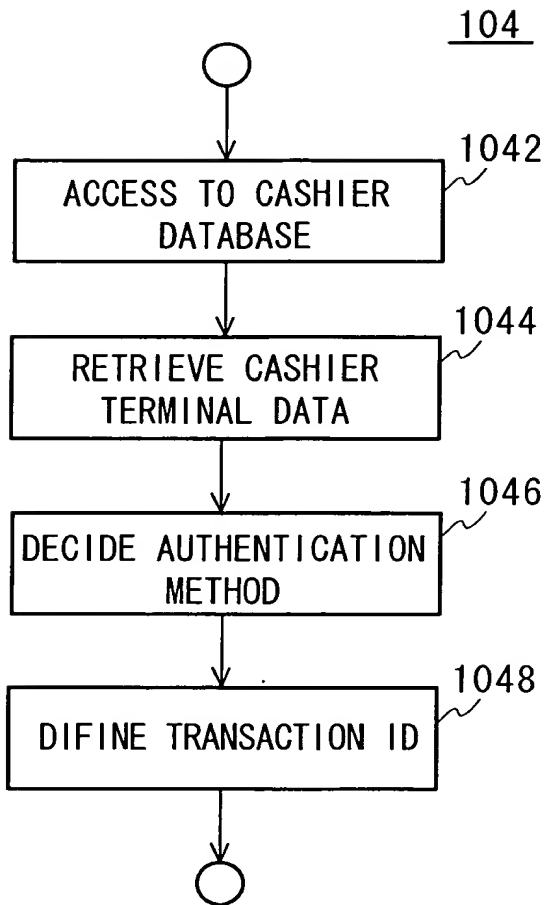


FIG. 6

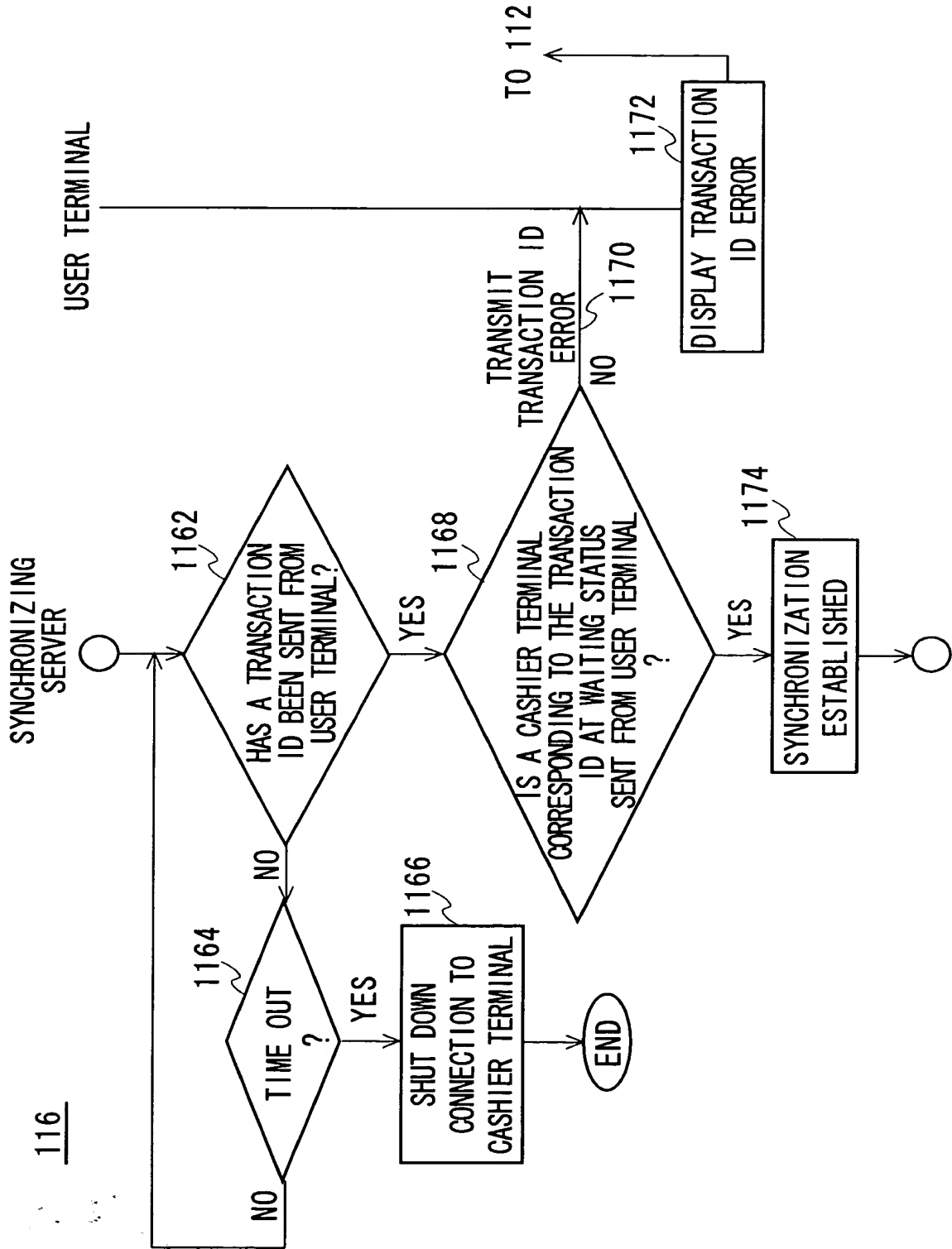


FIG. 7

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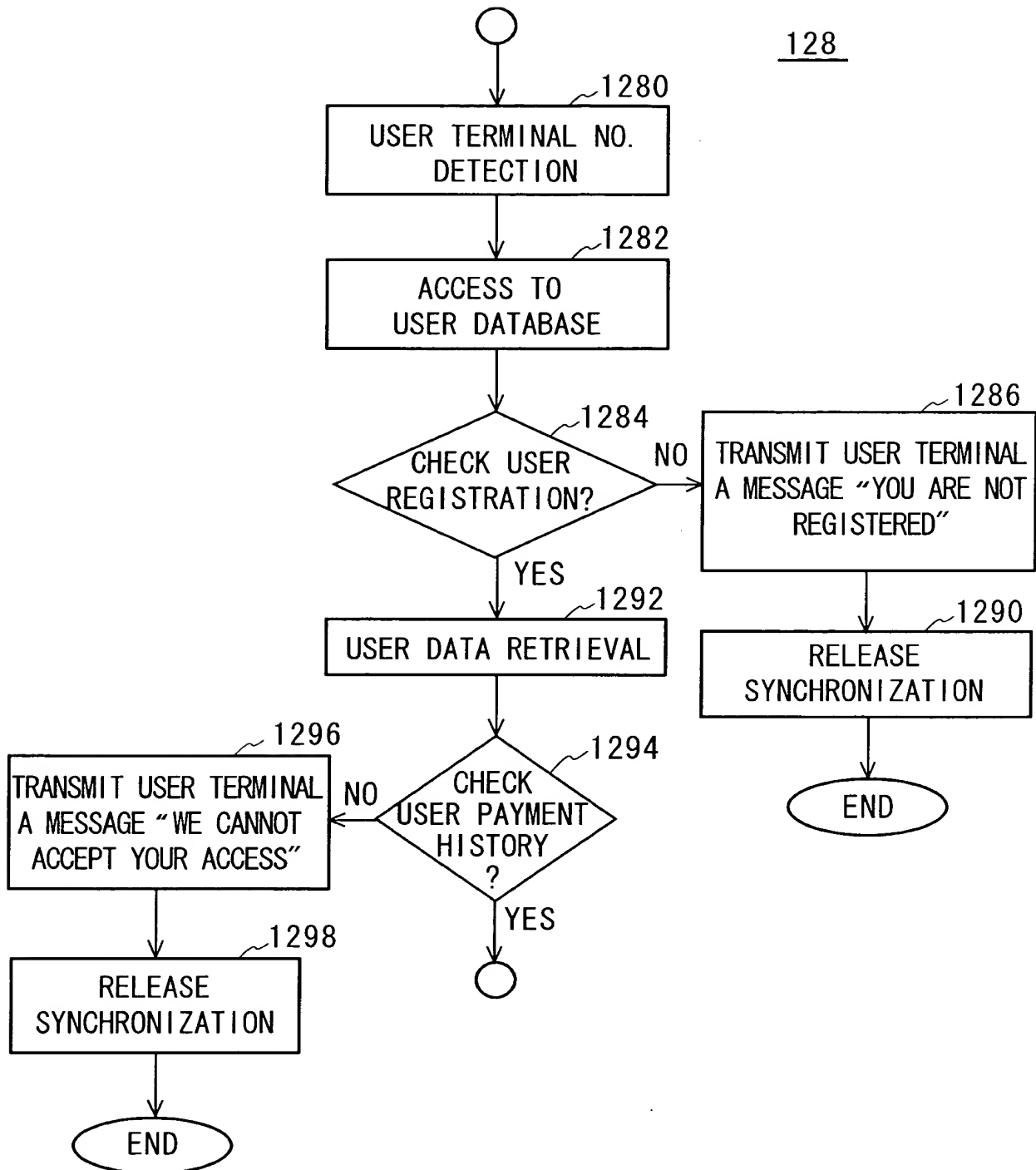


FIG. 8

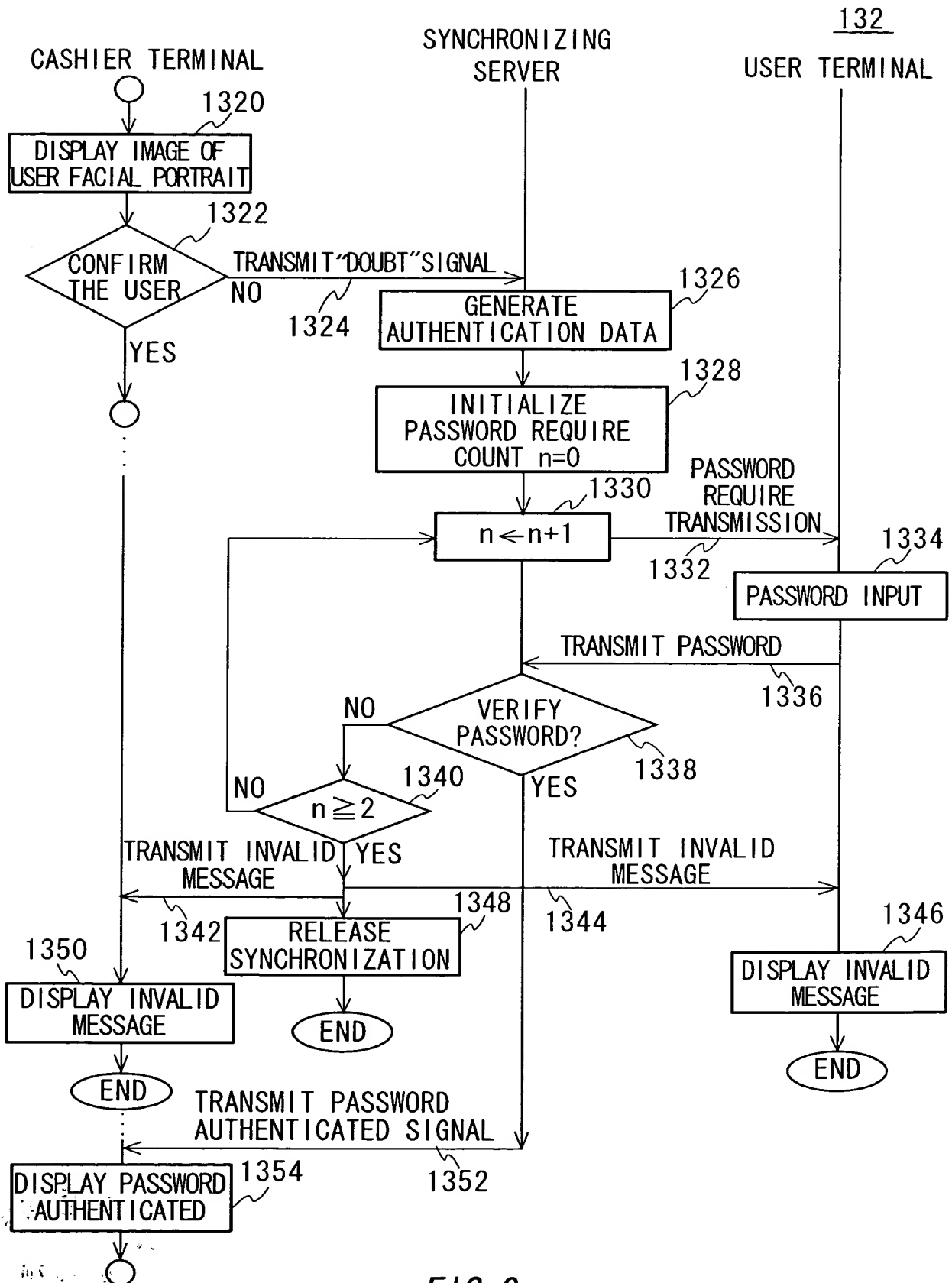


FIG. 9

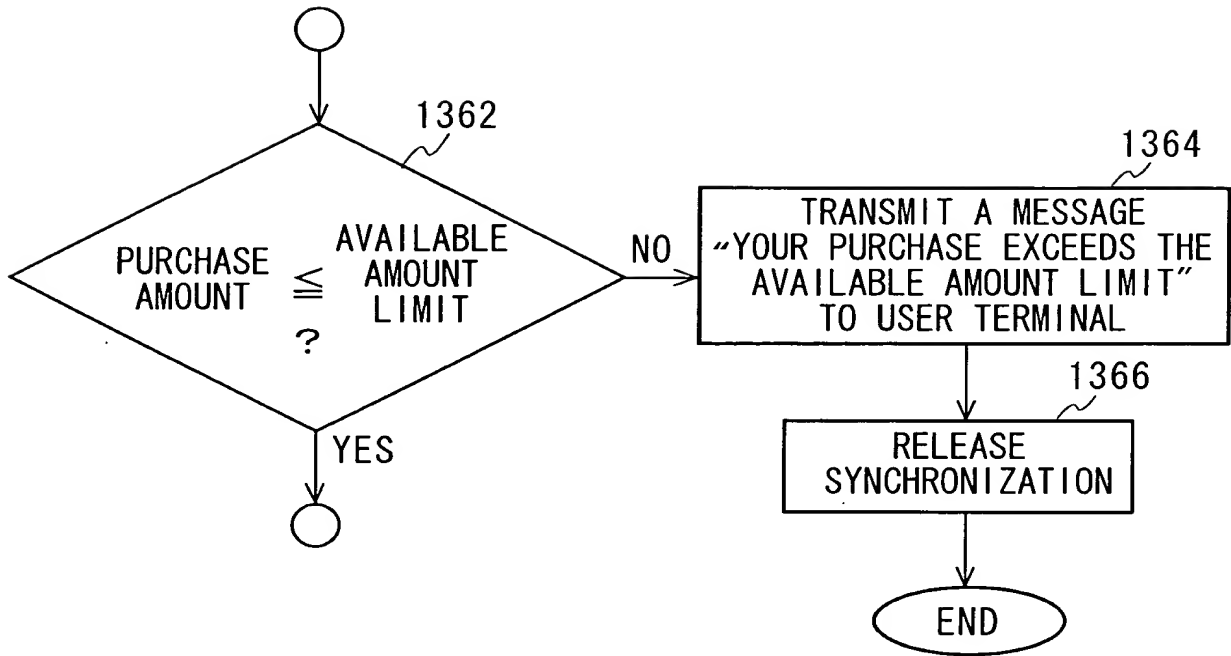
136

FIG. 10

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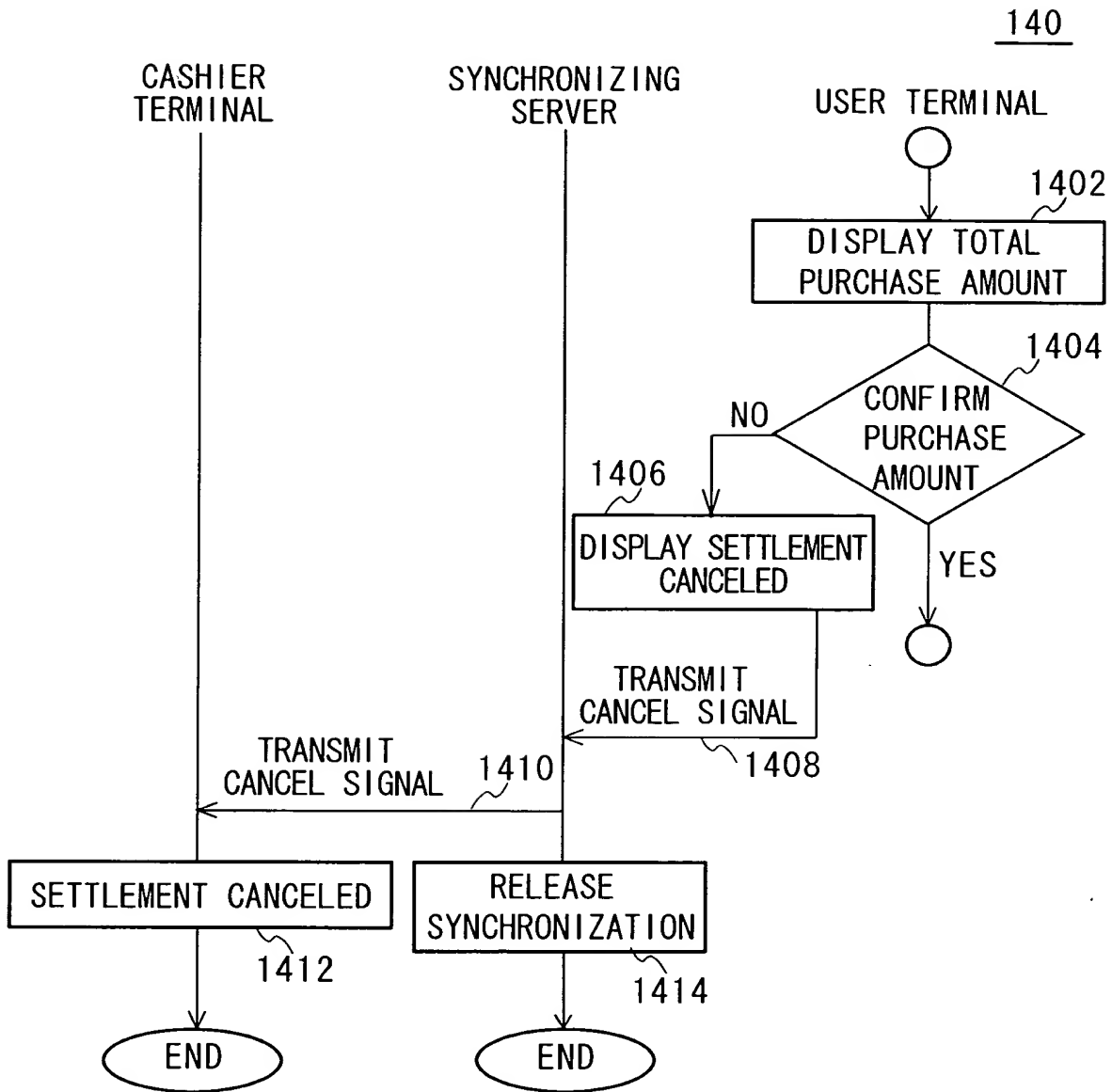


FIG. 11

(b)

CANCEL

OK

(d)

OK

DOUBT

(f)

OK

(h)

SETTLEMENT IS COMPLETED.

NI-0005

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(a)

INPUT CASHIER NUMBER.

1 2 3 4

SEND CANCEL

(b)

WE CANNOT FIND YOUR CASHIER.
PLEASE ENTER CORRECT CASHIER NUMBER.

OK

(c)

YOU PURCHASE AT:
AA STORE
BB BRANCH
NO. 2 CASHIER

OK CANCEL

(d)

YOU ARE NOT A REGISTERED USER.

OK

(e)

WE CANNOT ACCEPT YOUR ACCESS.

OK

(f)

INPUT PASSWORD.

OK

(g)

WE CANNOT AUTHENTICATE YOU.
WE CANNOT SERVE YOU.

OK

(h)

YOUR PURCHASE EXCEEDS AVAILABLE LIMIT.

OK

(i)

YOU PURCHASE AT:
AA STORE
YOUR PURCHASE AMOUNT: 3584YEN

OK
CANCEL

(j)

SETTLEMENT IS CANCELED.

OK

(k)

SETTLEMENT IS COMPLETED.

BACK TO MENU

FIG. 13

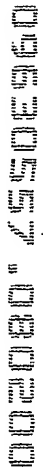
6000

CASHIER REGISTRATION NUMBER	1234567
RETAILER NAME	ABC SHOP
STORE NAME	SHINJUKU
CASHIER TERMINAL NO.	2
AUTHENTICATION METHOD	VISUAL AUTHENTICATION AND PASSWORD AUTHENTICATION

FIG. 14

002080" 2.550E960





BIBLIOGRAPHY

002080" 2550E960

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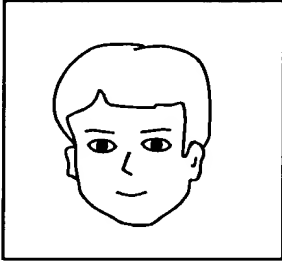
NAME	ICHIRO SUZUKI
AGE	32
SEX	MALE
ADDRESS	SHINJUKU-KU TOKYO
OCCUPATION	PHYSICIAN
FACIAL PORTRAIT DATA	

FIG. 16

6030

PURCHASE DATE	PURCHASE ID	PURCHASE AMOUNT	SETTLEMENT DATE
1999/8/10 10:20	1942356	2,341YEN	1999/8/25
1999/9/1 14:00	2341235	4,000YEN	1999/9/25
1999/9/4 16:30	4256783	13,200YEN	1999/9/25
.	.	.	.
.	.	.	.
.	.	.	.
.	.	.	.

FIG. 17

GRANDFATHER' S NAME	TARO
GRANDMOTHER' S NAME	HARUKO
MOTHER' S MAIDEN NAME	TANAKA
DOMICILE TOWN NAME	TOUNO-CHOU
FAVORITE AUTHOR	SHAKESPEARE
ELEMENTARY SCHOOL NAME	HANAZONO
.	.
.	.
.	.
.	.

FIG. 18

TYPE	AUTHENTICATION METHOD APPOINTED BY CASHIER TERMINAL
R1	NO AUTHENTICATION
R2	VISUAL AUTHENTICATION OR PASSWORD AUTHENTICATION
R3	VISUAL AUTHENTICATION ONLY
R4	PASSWORD AUTHENTICATION ONLY
R5	VISUAL AUTHENTICATION AND PASSWORD AUTHENTICATION
R6	if PURCHASE AMOUNT \geq 10,000YEN then VISUAL AUTHENTICATION AND PASSWORD AUTHENTICATION or else VISUAL AUTHENTICATION
.	.
.	.
.	.
.	.

FIG. 19

TYPE	AUTHENTICATION METHOD APPOINTED BY USER
U1	NOT APPOINTED (DEPENDENT ON CASHIER TERMINAL)
U2	ADD PASSWORD AUTHENTICATION
U3	REFUSE VISUAL AUTHENTICATION
U4	if PURCHASE AMOUNT \geq 5,000YEN then ADD PASSWORD AUTHENTICATION or else NO APPOINT
.	.
.	.
.	.
.	.

FIG. 20

AUTHENTICATION METHOD APPOINTED BY CASHIER TERMINAL	AGREEABLE AUTHENTICATION METHOD			AUTHENTICATION METHOD APPOINTED BY USER
	VISUAL AUTHENTICATION	PASSWORD AUTHENTICATION	REJECTION	
NO AUTHENTICATION				NONE
VISUAL AUTHENTICATION OR PASSWORD AUTHENTICATION	△	△		NONE
VISUAL AUTHENTICATION ONLY	○			NONE
PASSWORD AUTHENTICATION ONLY		○		NONE
VISUAL AUTHENTICATION AND PASSWORD AUTHENTICATION	○	○		NONE
VISUAL AUTHENTICATION OR PASSWORD AUTHENTICATION	○	○		ADD PASSWORD AUTHENTICATION
VISUAL AUTHENTICATION ONLY	○	○		ADD PASSWORD AUTHENTICATION
PASSWORD AUTHENTICATION ONLY		○		ADD PASSWORD AUTHENTICATION
VISUAL AUTHENTICATION AND PASSWORD AUTHENTICATION	○	○		ADD PASSWORD AUTHENTICATION
VISUAL AUTHENTICATION OR PASSWORD AUTHENTICATION		○		REFUSE VISUAL AUTHENTICATION
VISUAL AUTHENTICATION ONLY			○	REFUSE VISUAL AUTHENTICATION
PASSWORD AUTHENTICATION ONLY		○		REFUSE VISUAL AUTHENTICATION
VISUAL AUTHENTICATION AND PASSWORD AUTHENTICATION			○	REFUSE VISUAL AUTHENTICATION

FIG. 21

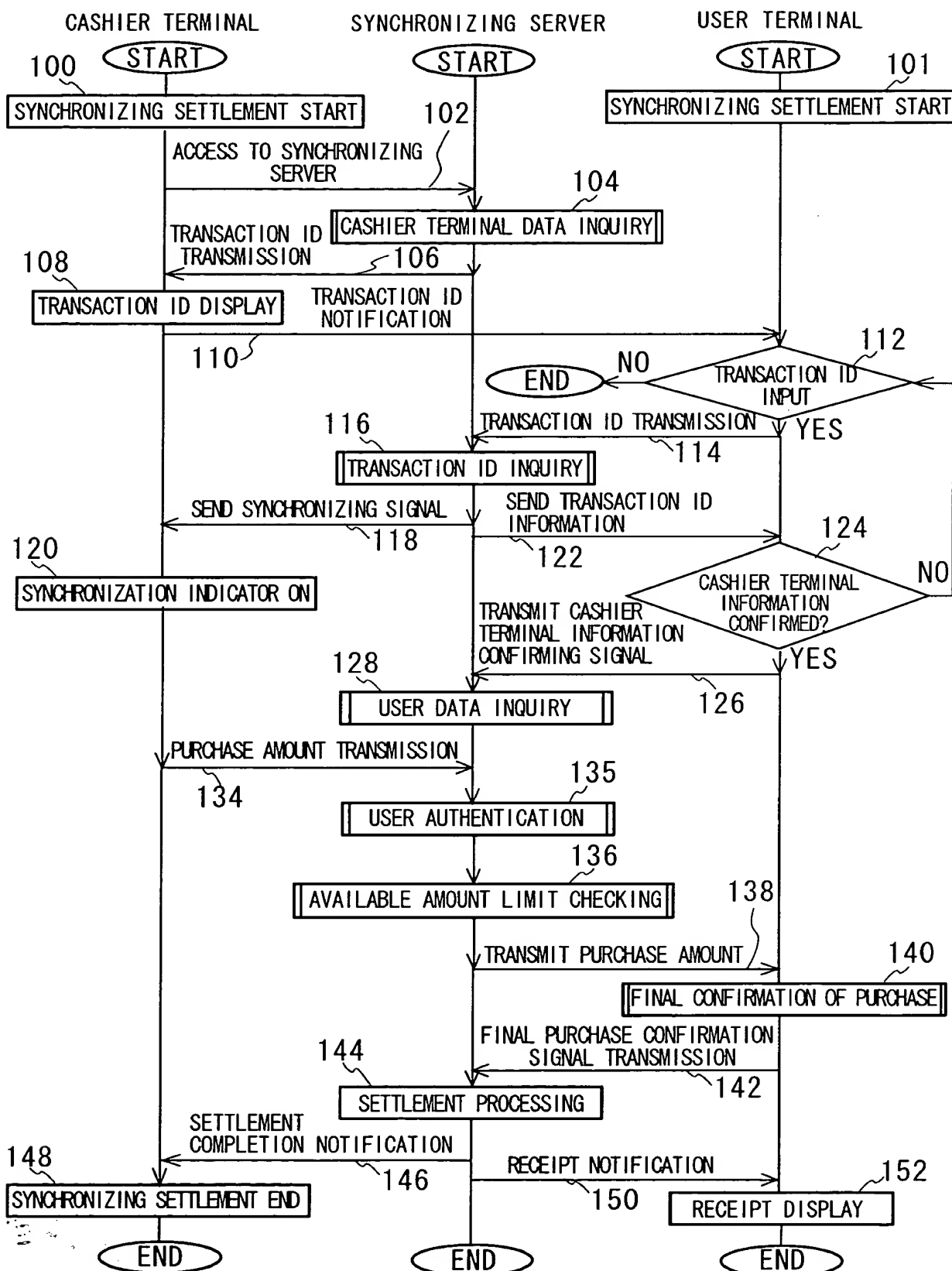


FIG. 22

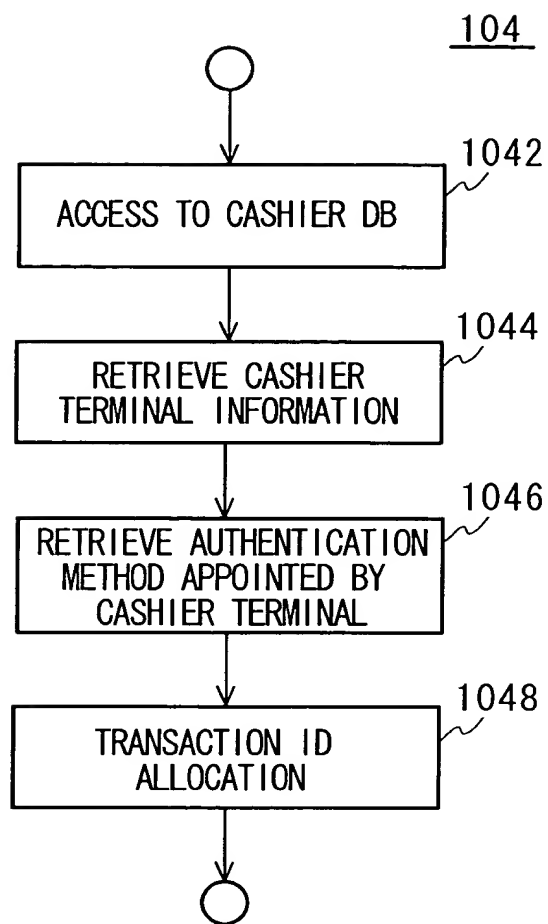


FIG. 23

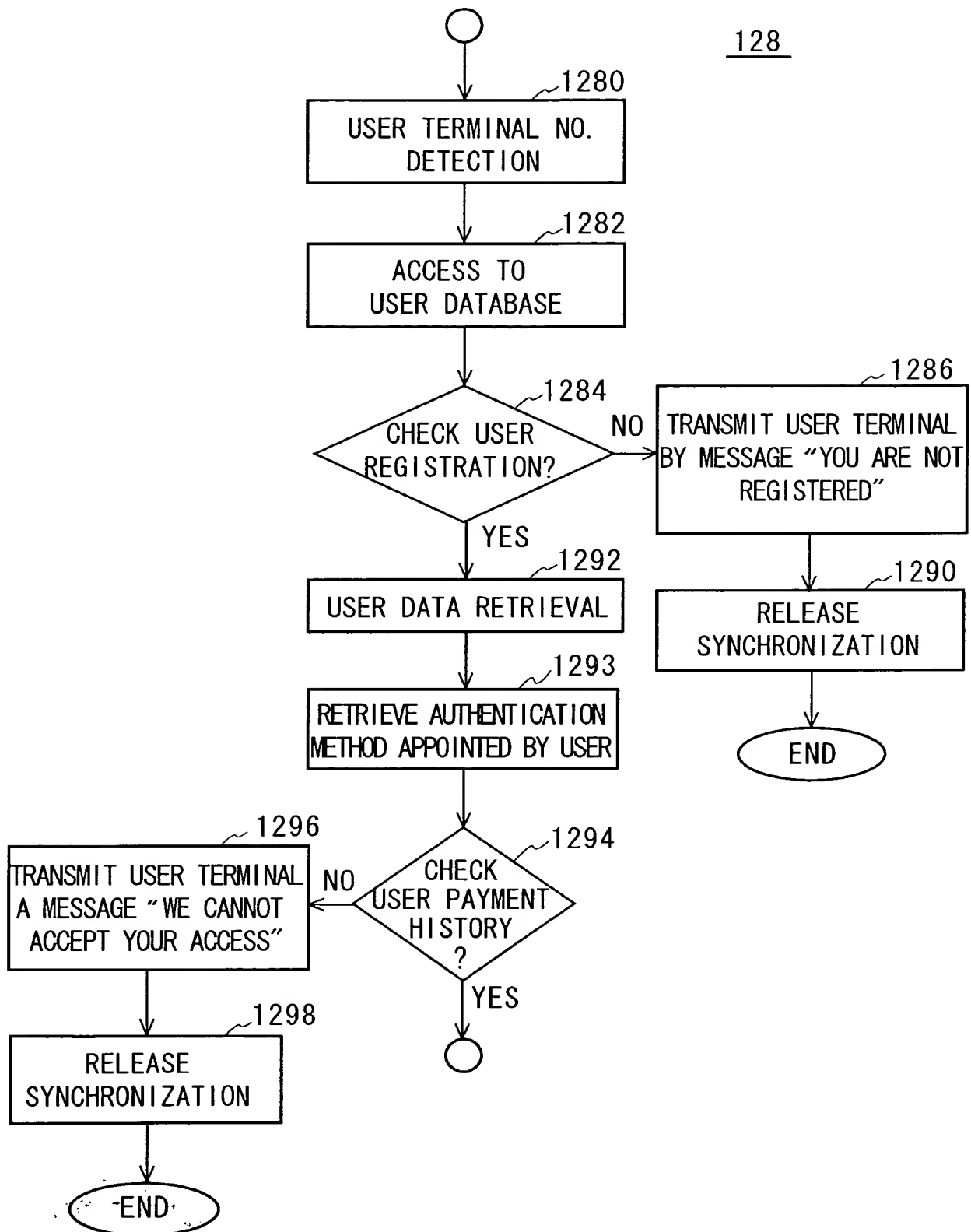


FIG. 24

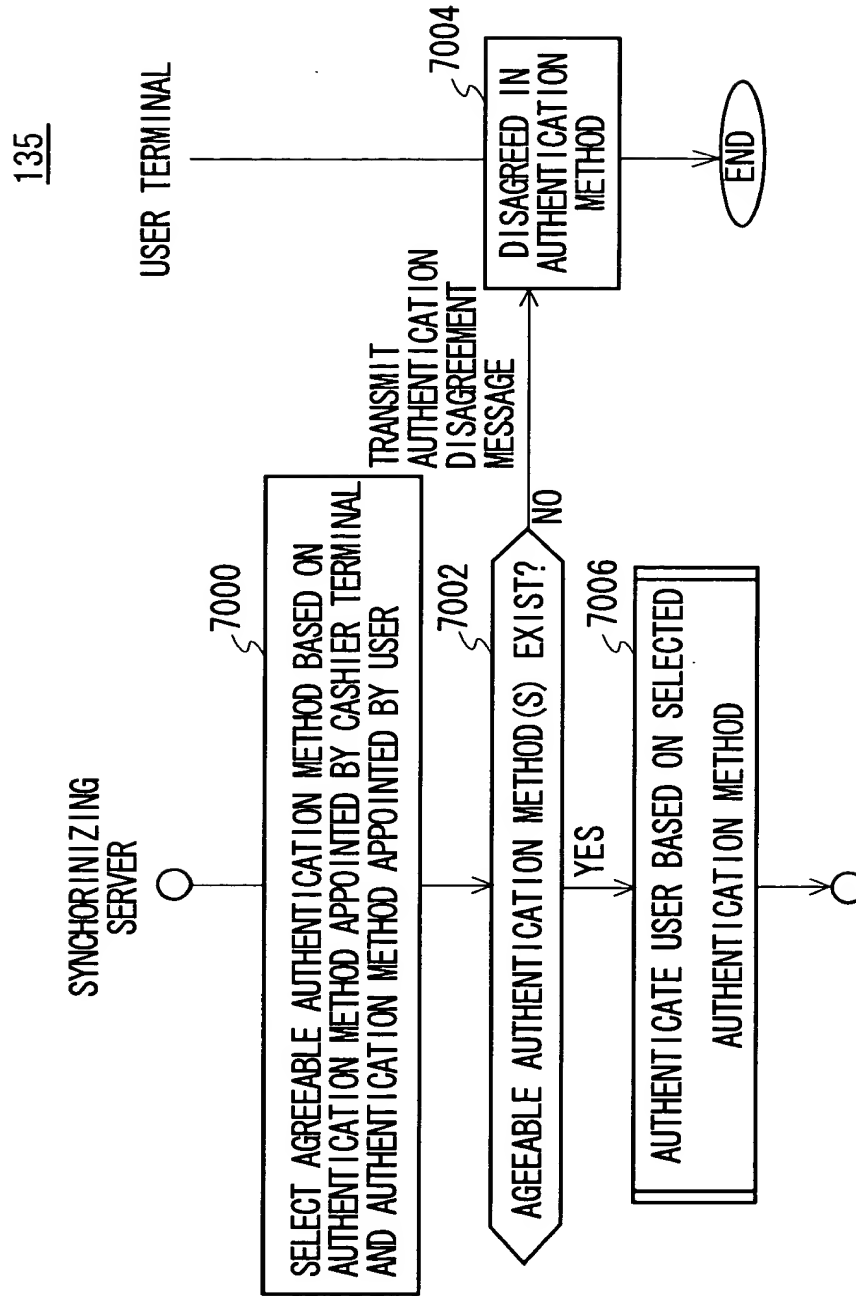


FIG. 25

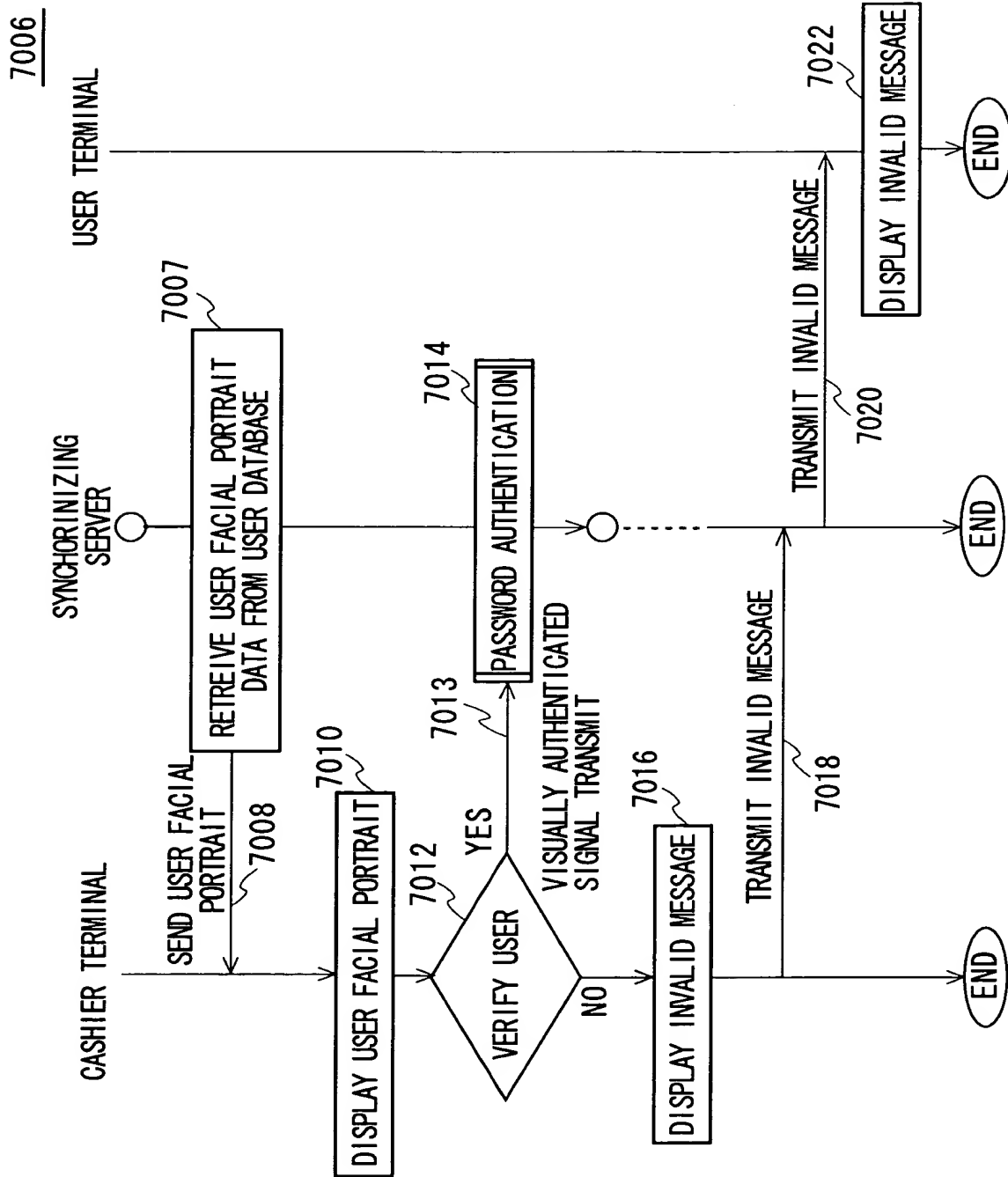


FIG. 26

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CASHIER TERMINAL

SYNCHRONIZING
SERVER

USER TERMINAL

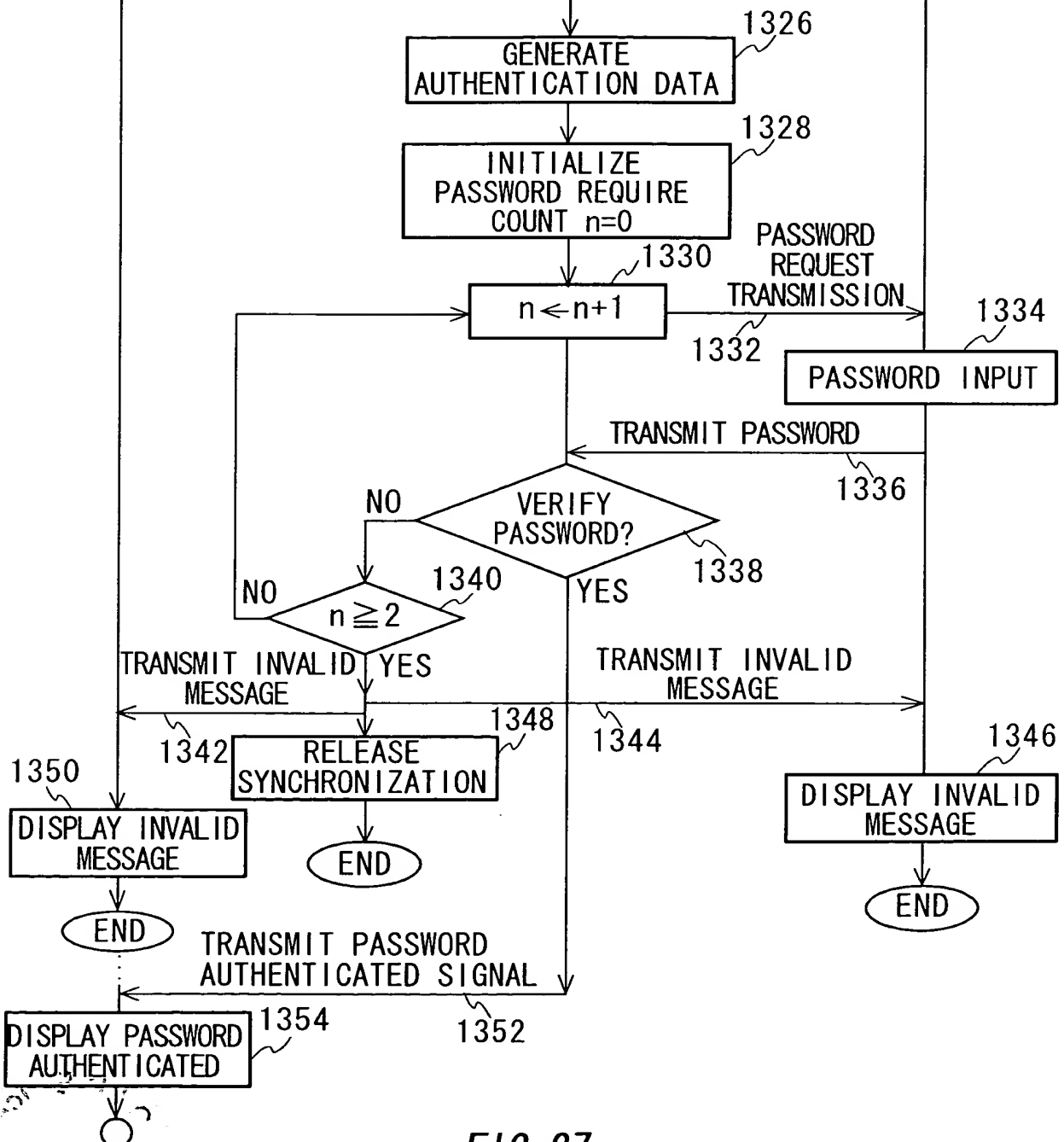


FIG. 27

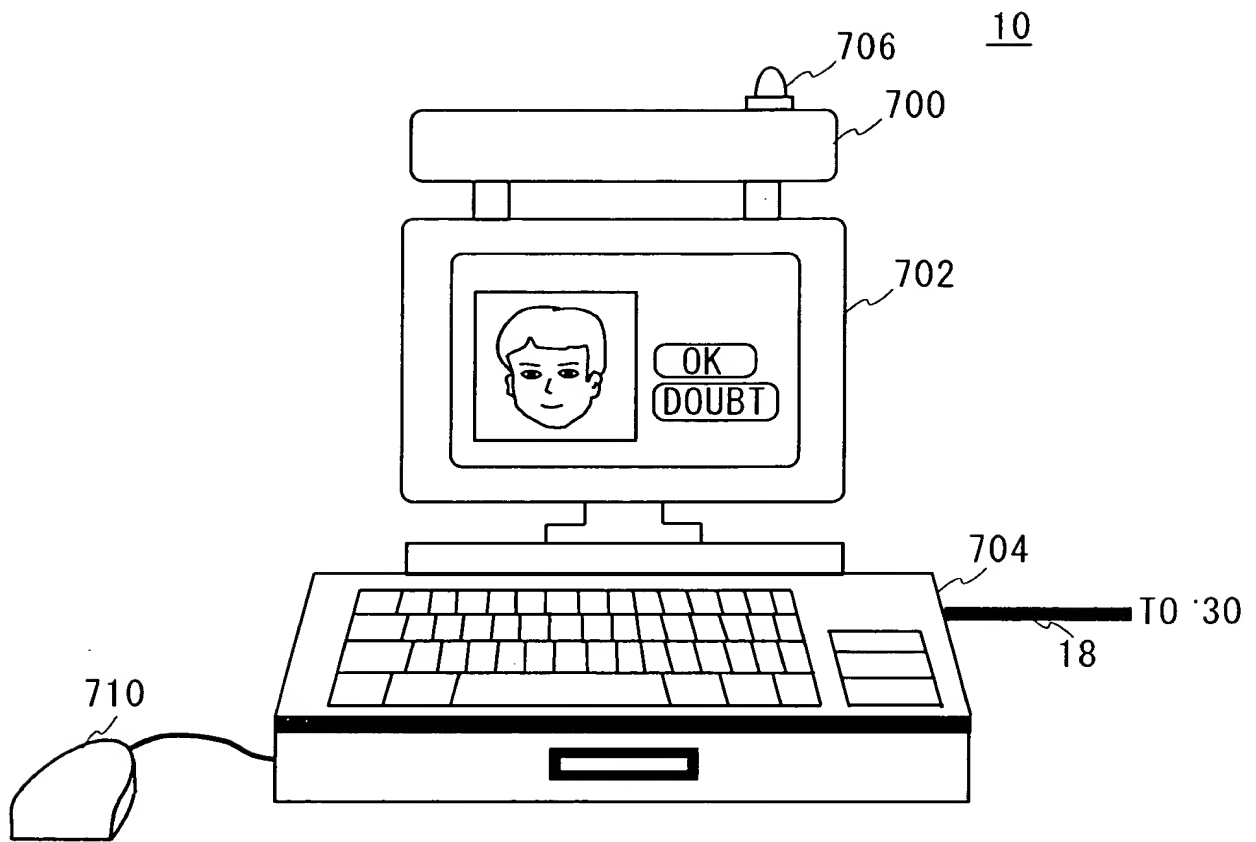


FIG. 28

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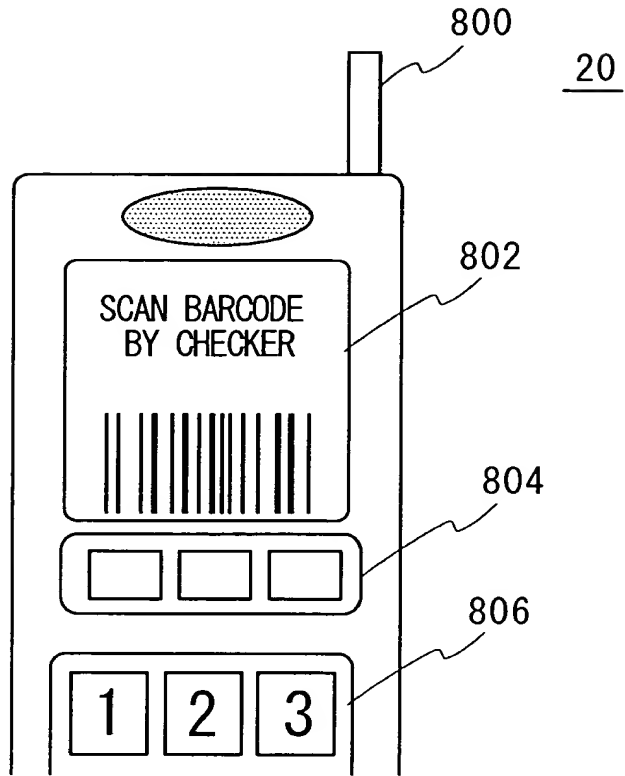


FIG. 29

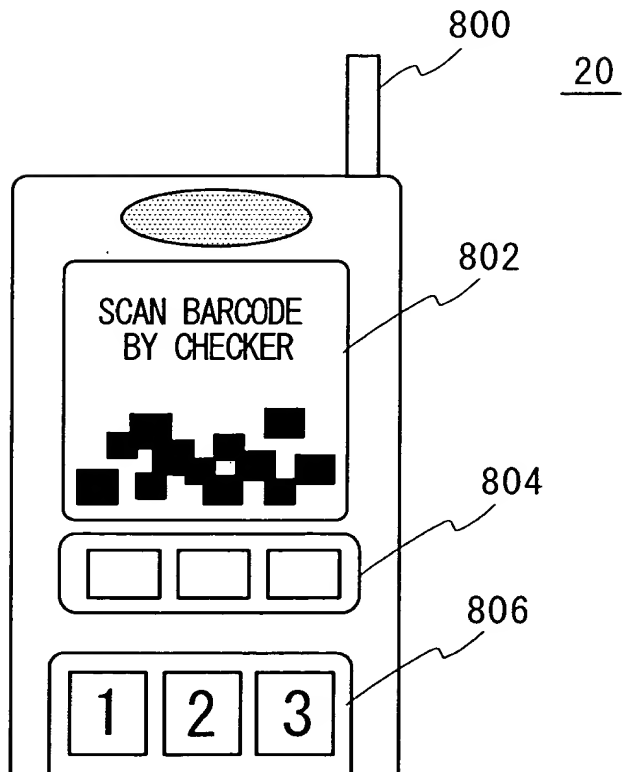
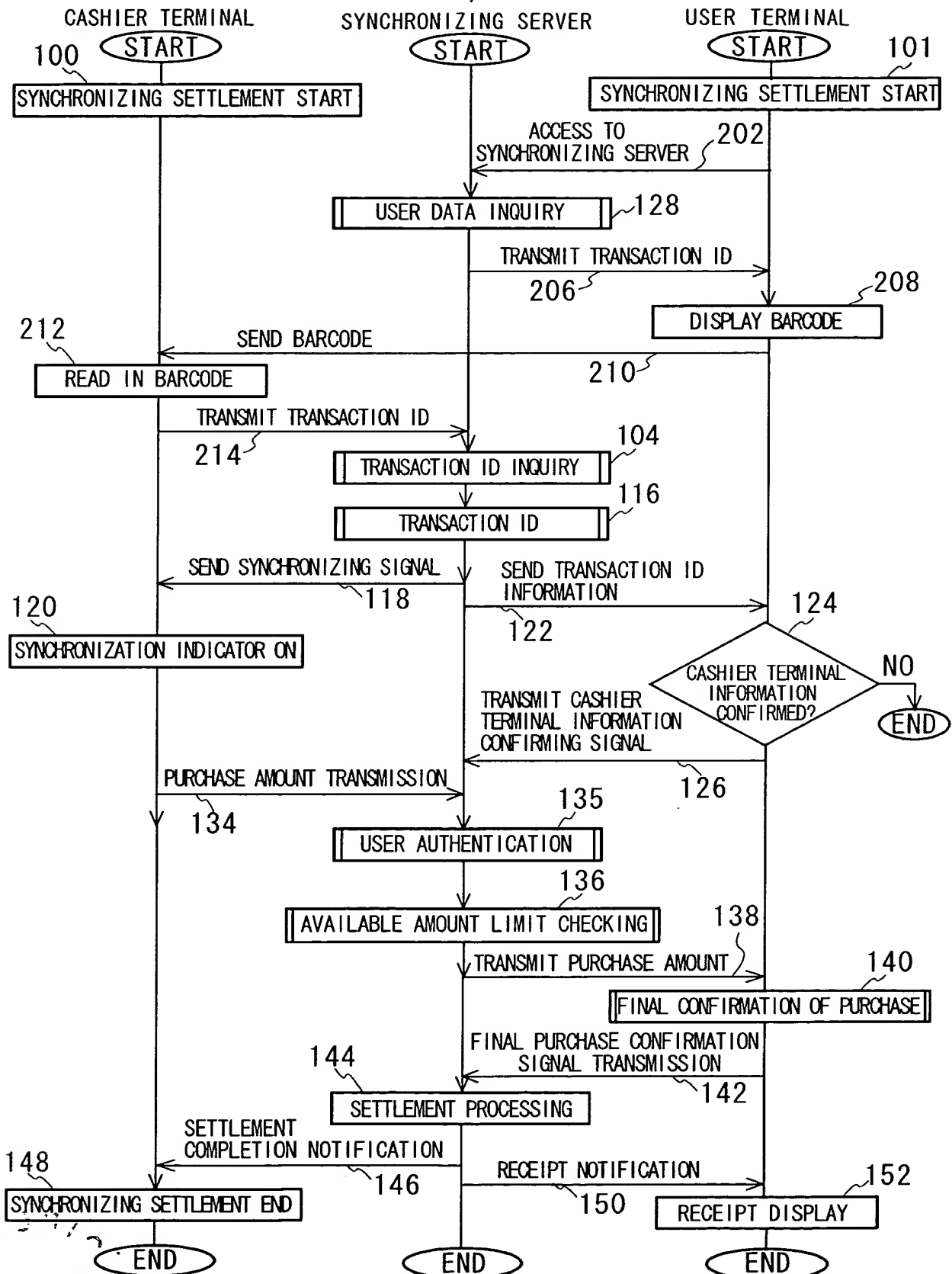


FIG. 30

002080" 2550E960



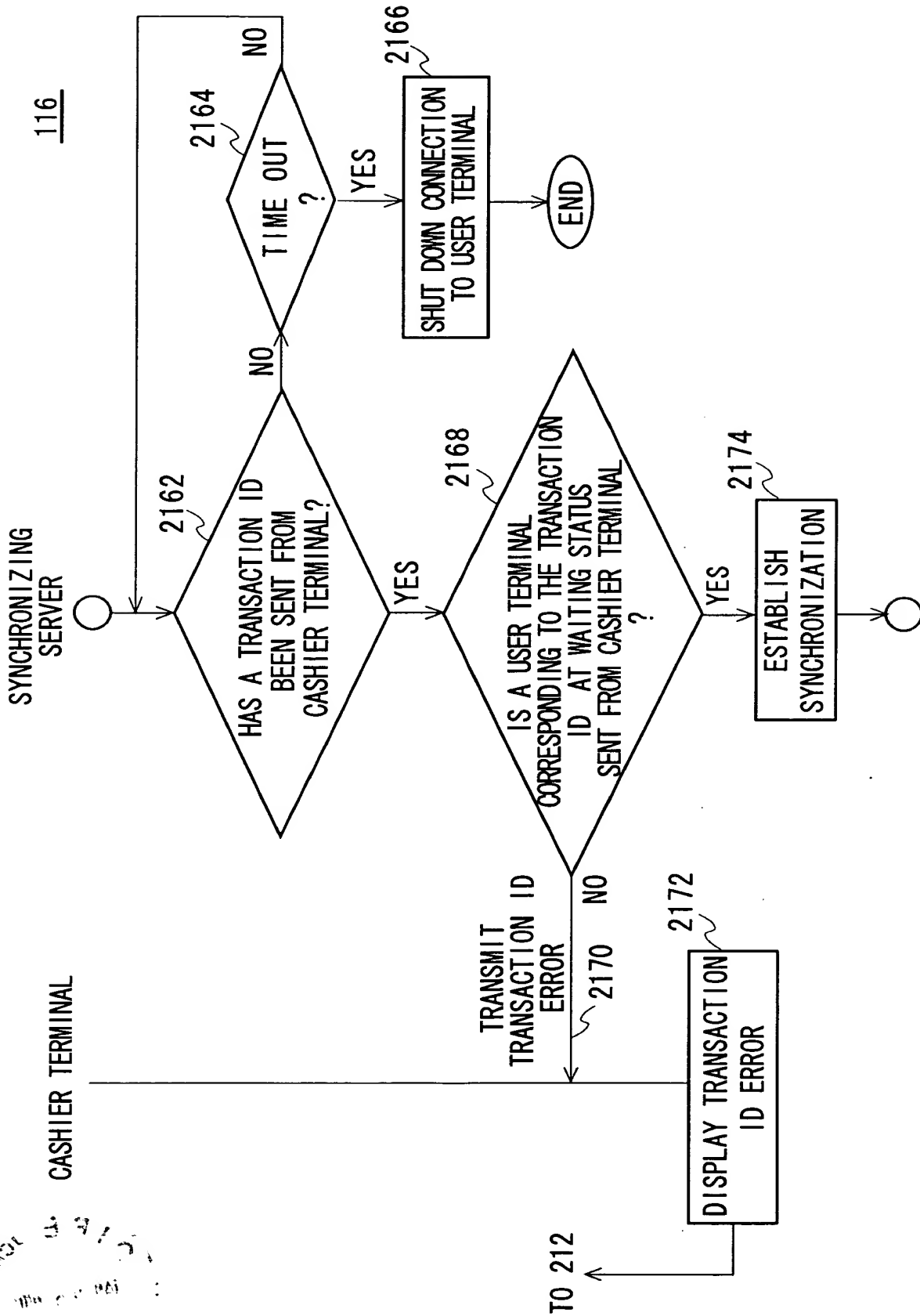


FIG. 32

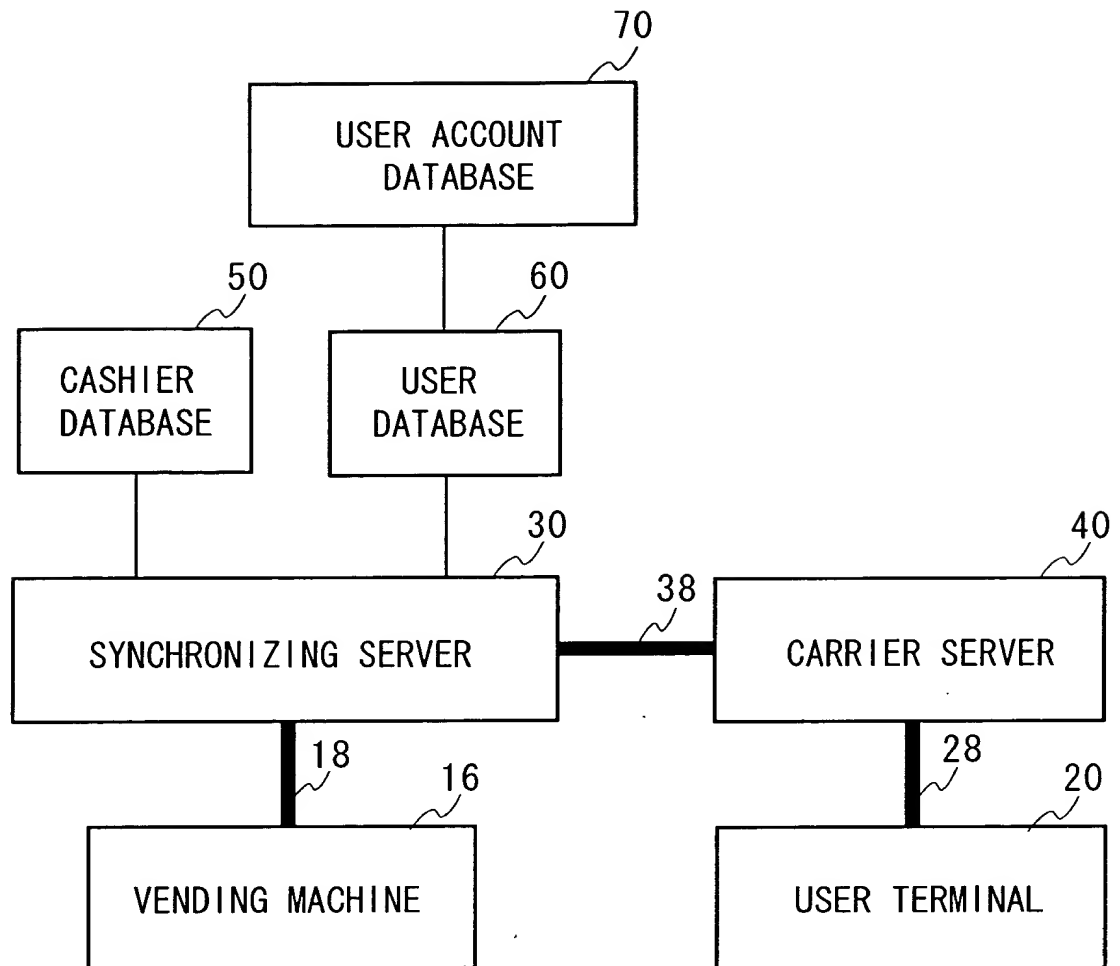


FIG. 33

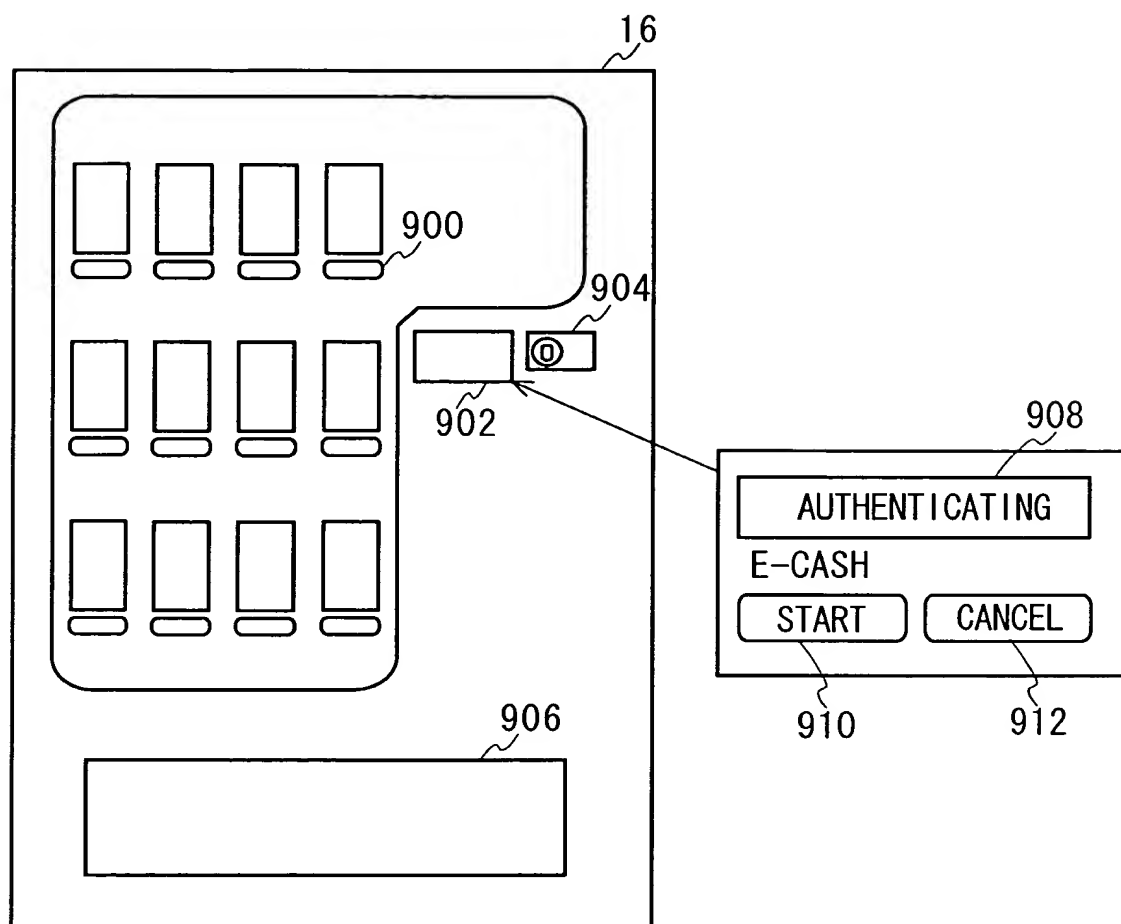


FIG. 34

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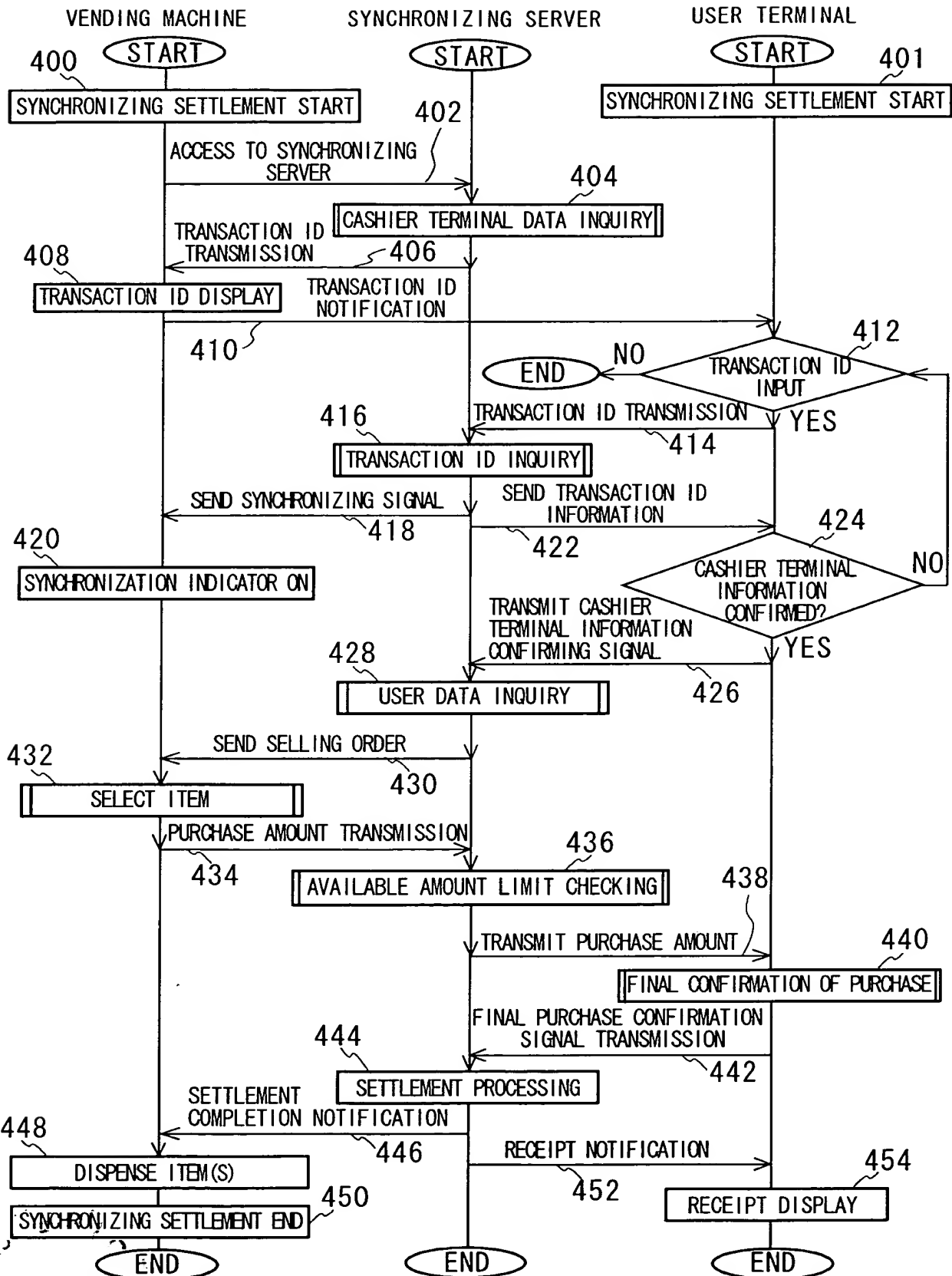


FIG. 35

(a)

VENDING MACHINE
NO. 135-SHINJUKU

OK CANCEL

(b)

VENDING MACHINE
NO. 135-SHINJUKU
PRICE: 120YEN

OK CANCEL

FIG. 36

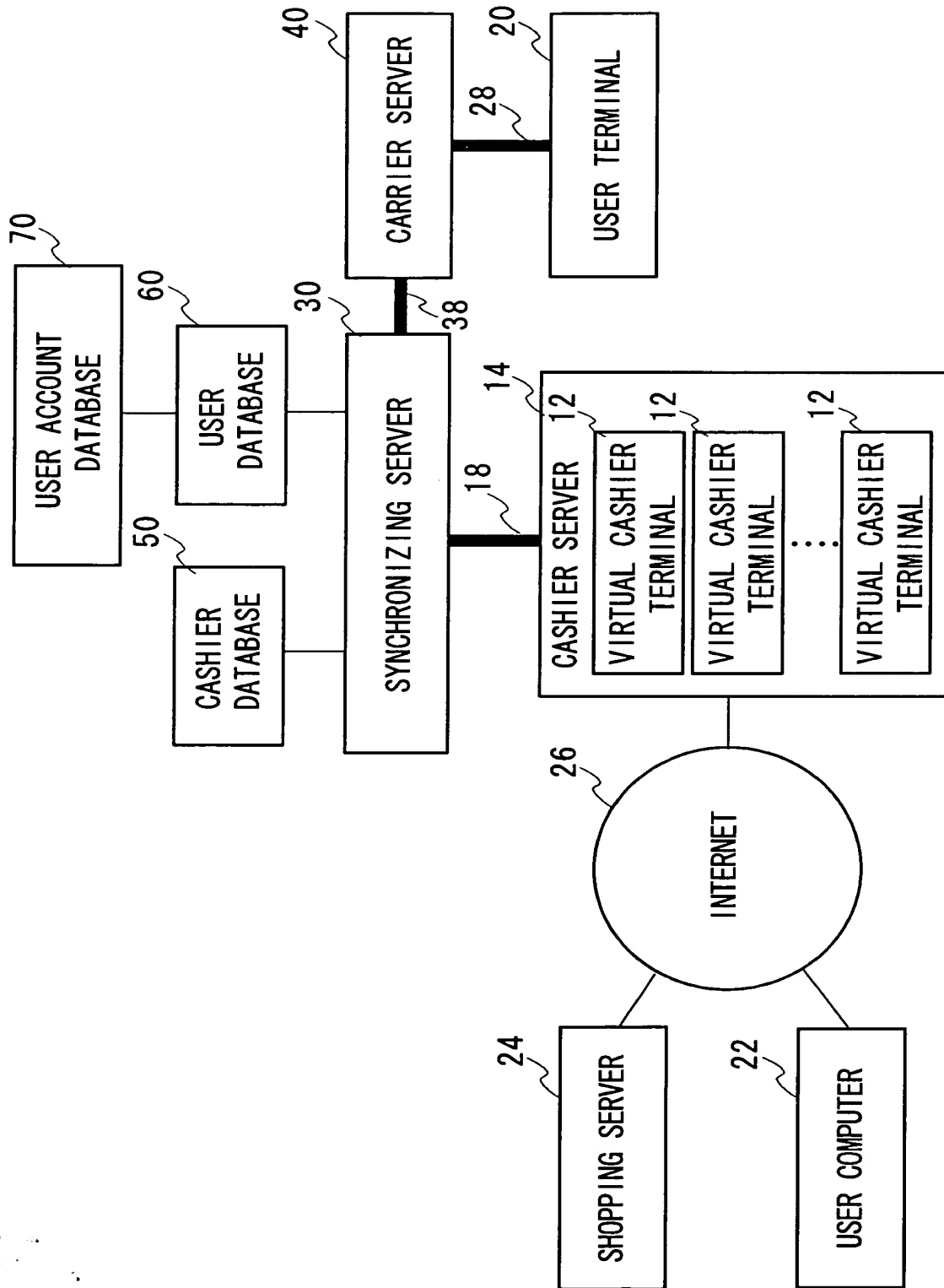


FIG. 37

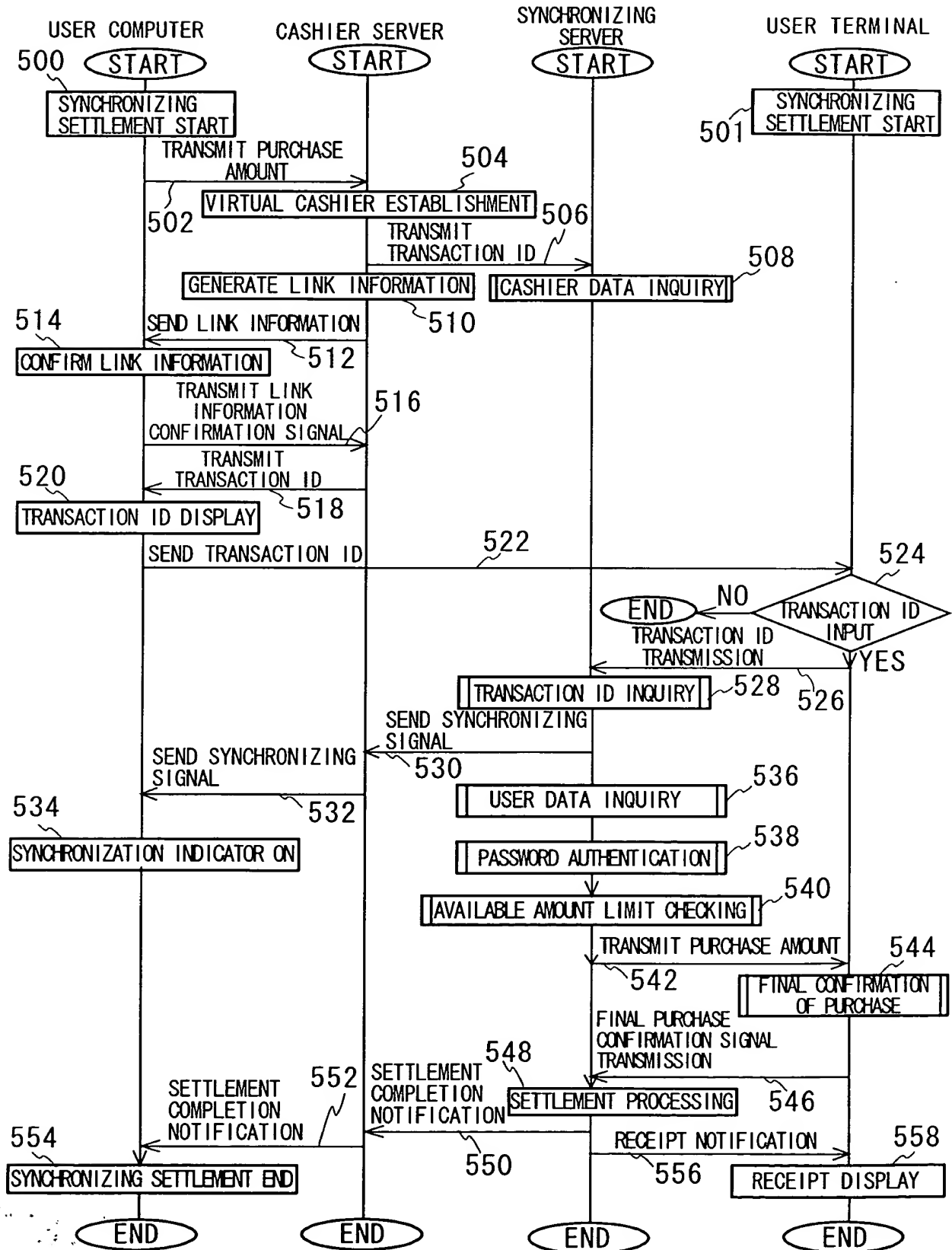


FIG. 38

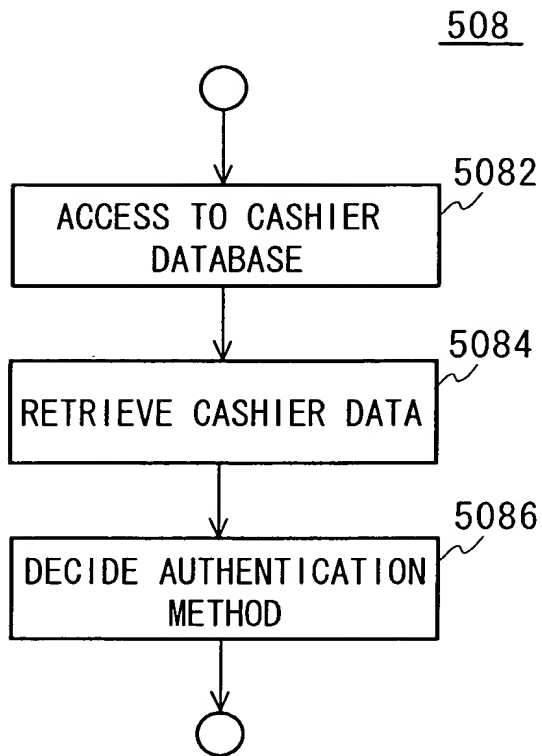


FIG. 39

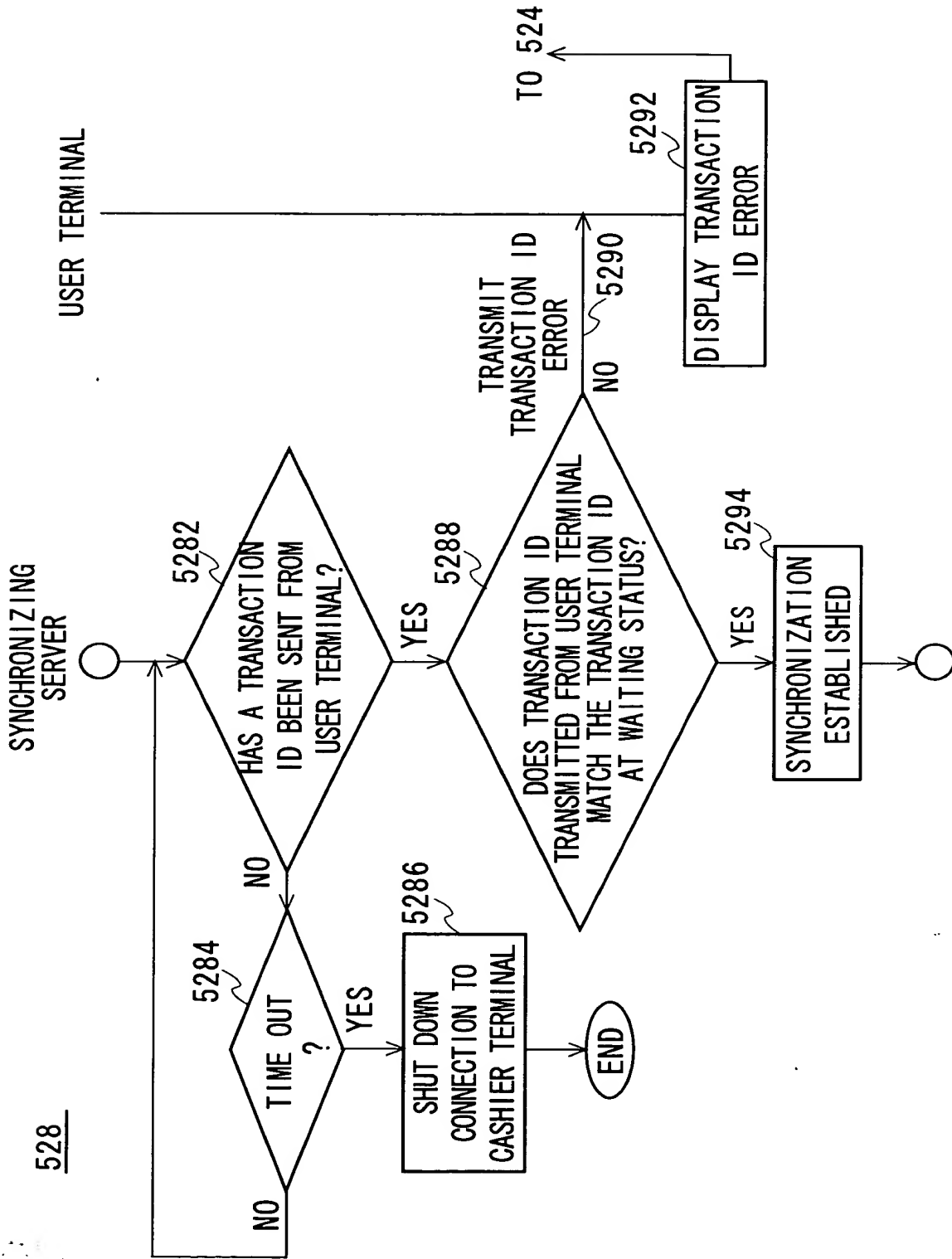


FIG. 40

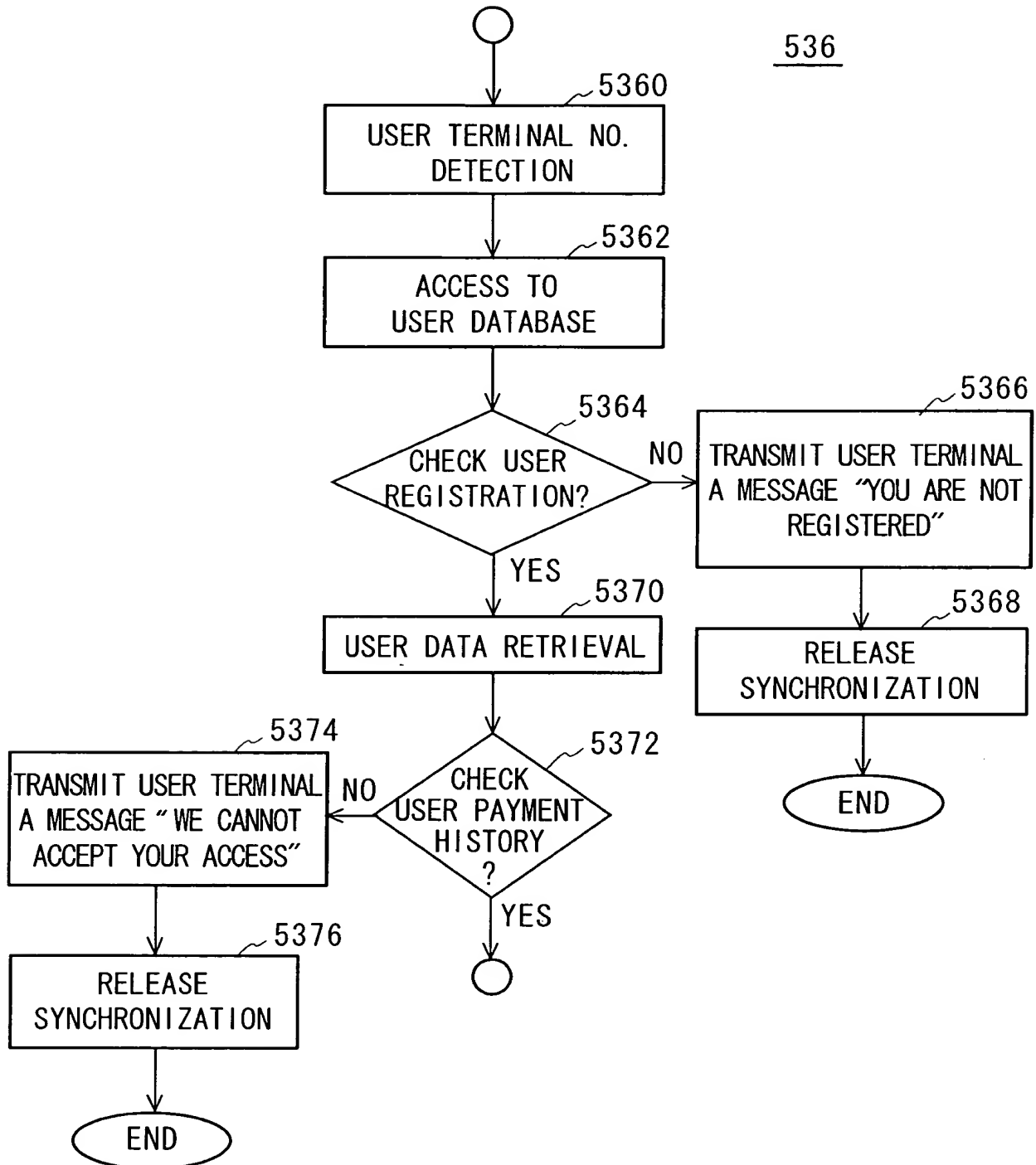


FIG. 41

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SYNCHRONIZING
SERVER

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USER TERMINAL

CASHIER TERMINAL

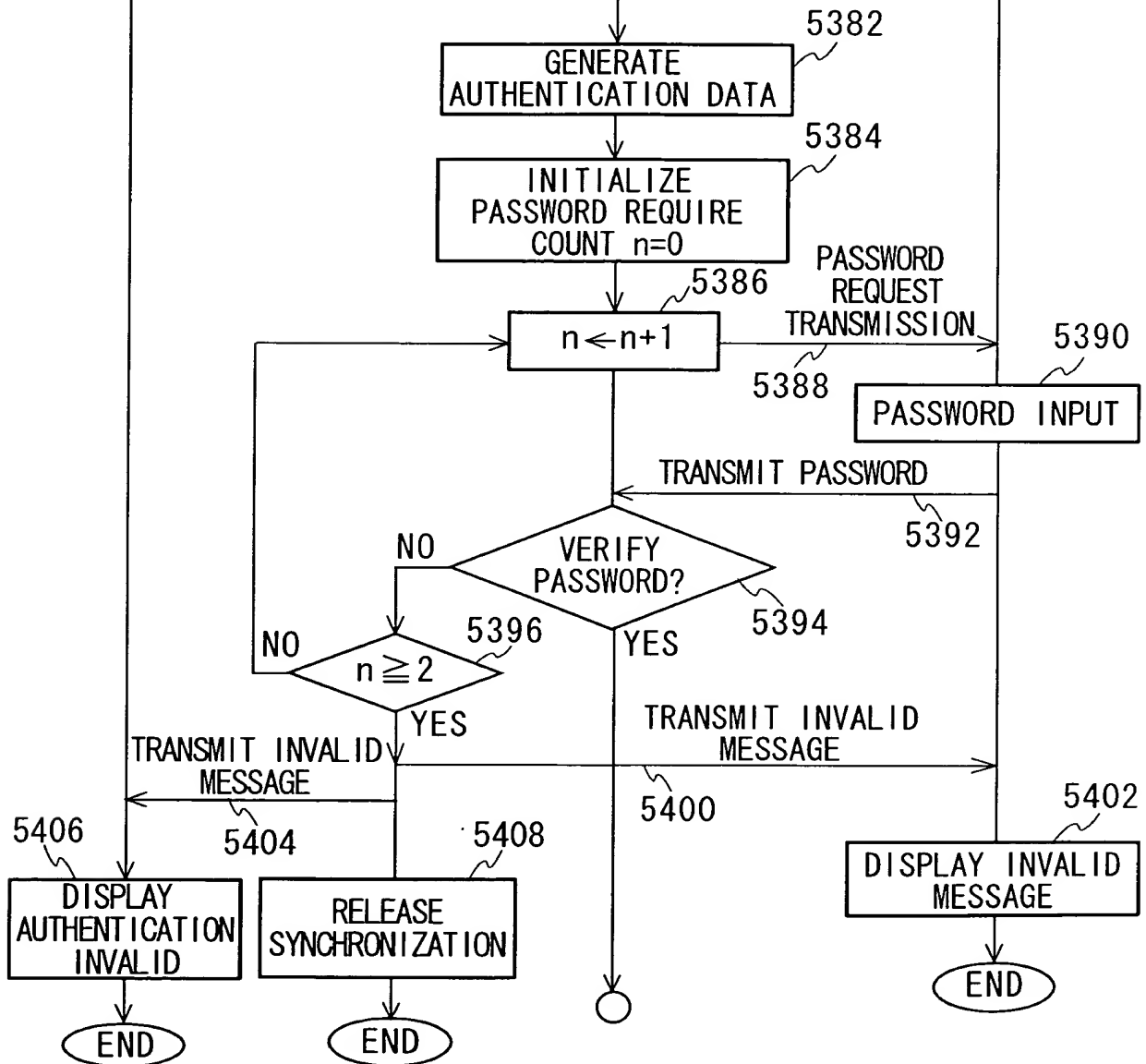


FIG. 42

THANK YOU FOR SHOPPING AT
AA ON-LINE SHOPPING.

BB PERSONAL COMPUTER.	1.	¥ 200,000
MEMORY 64M.	1.	¥ 10,000
PURCHASE		¥ 210,000
TAX		¥ 10,500
TOTAL		¥ 220,500

SYNCHRONIZING

SETTLEMENT

(a)

SYNCHRONIZING SETTLEMENT.

PURCHASE DETAIL

TOUCH "SYNCHRONIZE" BELOW TO START
SYNCHRONIZING SETTLEMENT.

SYNCHRONIZING

(b)

SYNCHRONIZING SETTLEMENT.

PURCHASE DETAIL

TOUCH "SYNCHRON
SYNCHRONIZING

CASHIER BROWSER
VIRTUAL CASHIER
TERMINAL

(c)

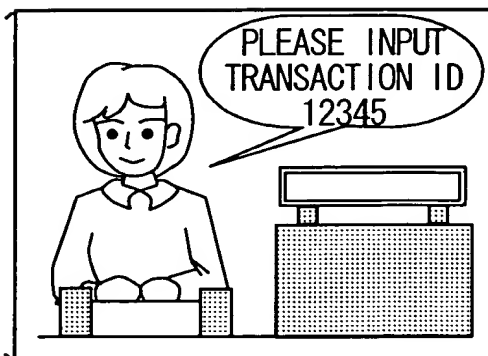


FIG. 43

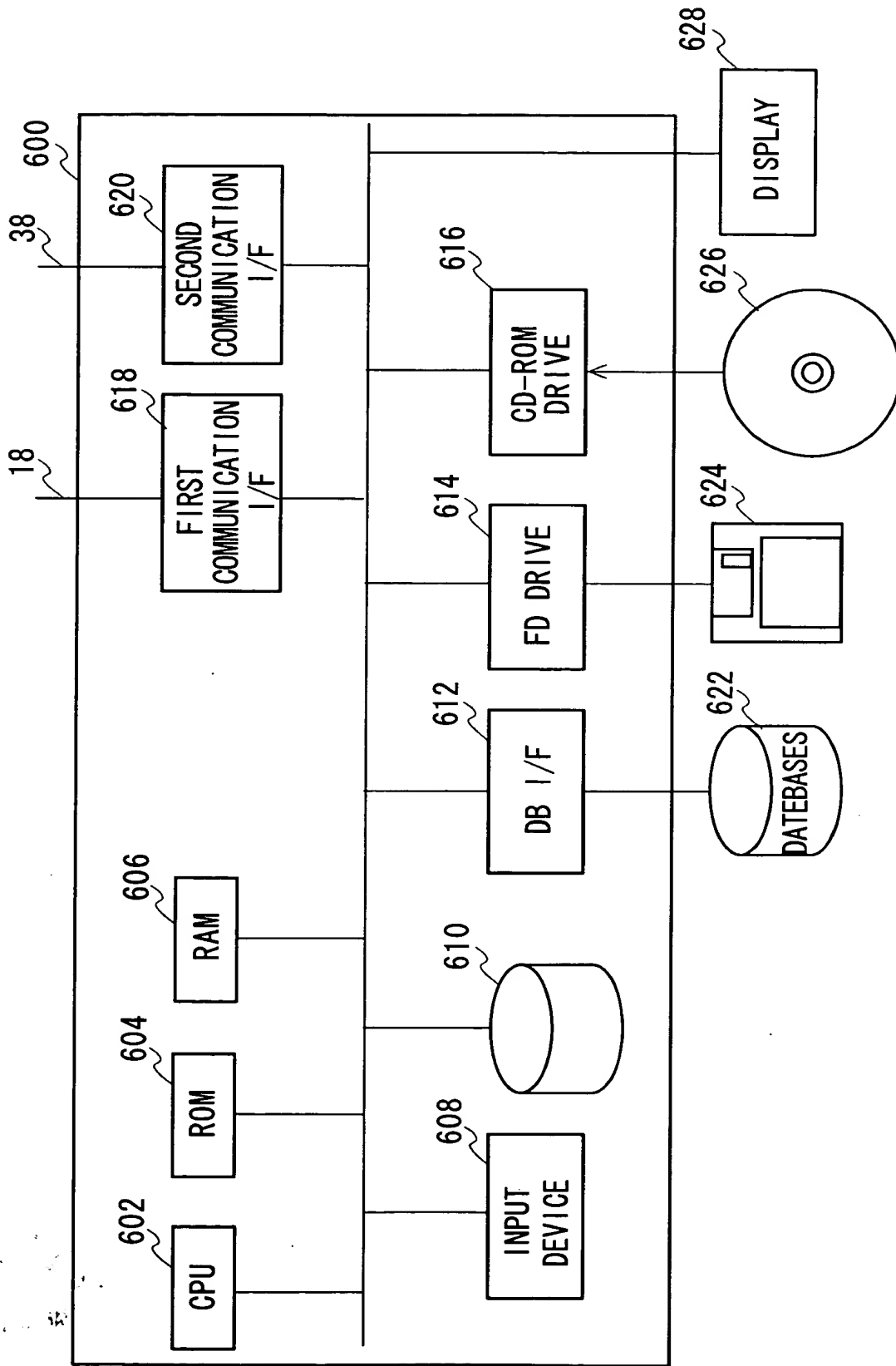


FIG. 44

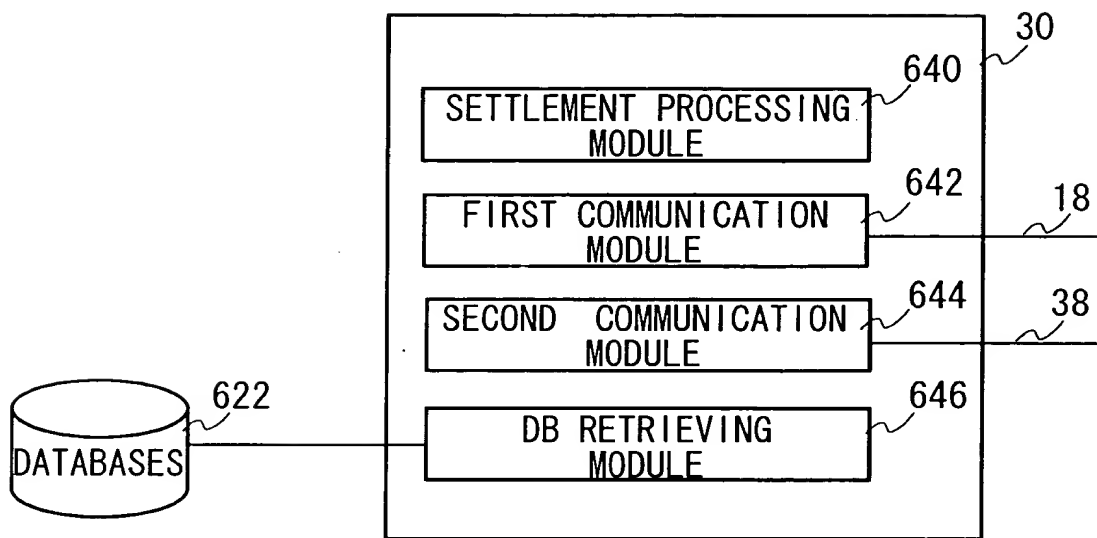


FIG. 45